Data Description and Naming Guidelines

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ABSTRACT: This document provides guidelines for applying standard names to data objects. Included are procedures for identifying the controller of a data object and developing the standard description, business name, and abbreviated name of the data object types association, element, entity, field, and model.

APPLICABILITY: This document is recommended for all Digital project development teams and other Digital personnel responsible for developing data models and data definitions.

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CHAPTER 1

INTRODUCTION

1.1 PURPOSE

This document defines guidelines and procedures for developing standard descriptions and names for all *data object* types defined in *DEC STD 065-0 Digital Standard Data Definitions*. The procedures in this document apply to the following data objects:

- Business Data Objects with their subtypes
  - — Data Model - 3NF, Optimized
  - — Entity - 3NF, Optimized
  - — Association - Relationships (Complex and Simple), Subtypes, and Classifications
  - — Element
- Implementation Data Object
  - — Field - Standard

Establishing standards for naming data objects ensures an information systems environment where data is shareable, understandable, meaningful and unambiguous. *Naming standards* provide consistent definitions that can be used by multiple businesses across functional or organizational boundaries. Naming standards facilitate the shared use of the data resource, allowing for the administration and control of data and allowing for the detection of the potential for shared data usage. The use of standard names in the information systems environment allows resource specialists to determine the impact of data change on the business and systems environment. In addition, the application of data object naming standards enables shareability, eliminates redundancy, improves software design and maintenance, and ensures high-quality business decisions.

1.2 INTENDED AUDIENCE

This document is intended to assist project development teams define shareable, consistent data definitions that can be used by multiple businesses across functional or organizational boundaries.

1.3 BENEFITS OF NAMING STANDARDS

Benefits to be gained by applying naming standards are as follows:

- Improved accessibility of data definitions—It will be easier to access required definitions with data names that conform to the standard.
- Improved quality of data analysis—By following the procedure, data analysts will be required to think carefully about the data they define in terms of how that data can be subsequently shared/re-used
- Reduced maintenance costs—If systems are developed using shared data definitions, rework or upgrades of those systems will require less definition of data.
- Better systems integration—Systems built using consistent data definitions will be easier to integrate than systems that use incompatible definitions.
- Reduced or eliminated data transfer costs—The cost of developing and maintaining feeder files and data conversion routines to transfer data around a network of systems will be reduced or eliminated.
- A system tailored to the business—The systems will fully support the requirements of the business by ensuring that data descriptions are completely understood by all those with an interest in the data. The business's data requirements will be expressed according to this standard; therefore, the data processed by individual application systems will be understandable to the business community whose systems are supported.

1.4 STRUCTURE OF THIS DOCUMENT

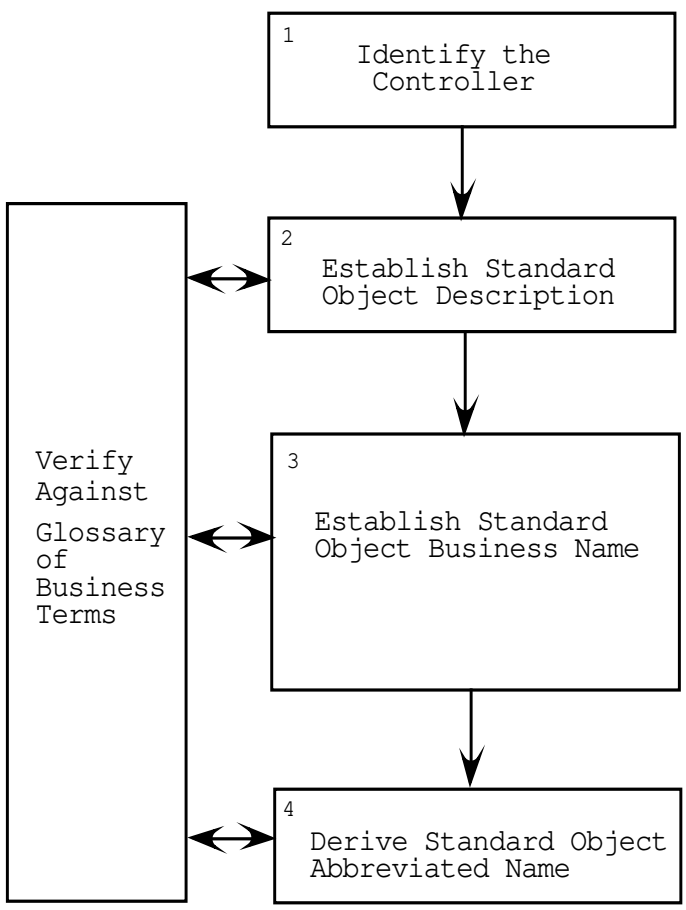
- Chapter 2 describes the general process for naming data objects and defines specific guidelines and procedures for developing and naming *elements*, one type of data object.
- Chapter 3 presents additional guidelines for naming other types of data objects, including *standard fields*, *models*, *entities*, and *associations*.
- Appendix A provides guidelines for using the Glossary of Business Terms.
- Appendix B lists related documents.

CHAPTER 2

THE DESCRIPTION PROCESS AND NAMING GUIDELINES

The basic steps used in developing descriptions and standard names for all data objects are outlined in Figure 1. Subsequent headings in this chapter detail each step in the naming process using the data object *element*. Additional or replacement guidelines for other data objects (*fields*, *models*, *entities*, and *associations*) are presented in Chapter 3.

Figure 1: Steps for Describing and Naming Data Objects



Process Activity:
- Establish the Business Controller responsible for the Data Object Definition

Deliverable: Controller ensures accuracy and usability of object definition.

Process Activities:
- Develop Initial Description
- Evaluate/Modify Description

Deliverable: A precise, unique, and unambiguous Business Name is developed from definition.

Process Activities:
- Identify Value Type
- Identify Primary Object/Process
- Identify Further Objects/Processes
- Identify Qualifiers
- Remove Unnecessary Terms
- Check the Size
- Review and Approve Business Name

Deliverable: A unique Business Name that can be used by multiple businesses across functional or organizational boundaries.

Process Activities:
- Determine if a Standard Abbreviation Exists
- Create New Abbreviation
- Connect Abbreviations Using "_"
- Check the Size

Deliverable: Abbreviated Name is used to implement the object in an automated environment.

2.1 IDENTIFY THE CONTROLLER

The *controller* is an agent or agency of Digital that has the knowledge, authority, and responsibility to ensure the accuracy and usability of the definition of a business data object. A controller can be an organization, a standing committee or staff, or an individual acting in a particular role, depending on how the requirement for authority, responsibility, and knowledge is best fulfilled. Refer to DEC STD 065-0 for a further explanation of controller. Controller responsibilities are as follows.

- Ensure that the definition of the object is accurate and supports the requirements of the business.
- Ensure that the definitions of other data objects that are derived from their original data object are consistent with the intent of the original, and that they use the original definition correctly.
- Ensure that the object definition is maintained.
- Review changes to the definitions of related data objects and ensure that conflicts do not arise.
- Identify a specific employee who becomes the contact point for review, feedback, questions, and resolution of conflict relative to the definition of a business data object.

In those cases where a controller cannot be clearly identified, contact a member of the Enterprise Data Board (EDB) who will help facilitate in designating a controller.

2.2 ESTABLISH STANDARD ELEMENT DESCRIPTION

The purpose of defining a standard element description is to provide shareable definitions that can be used by multiple businesses, across functional or organizational boundaries.

The three main characteristics of a good description are:

Understandable
Stable
Unique and unambiguous

All elements must be defined within the context of a 3NF or optimized data model and must be fully understandable and meaningful to the business. The basic steps required for creating a description are as follows.

1. Develop the initial description.
2. Evaluate/modify the initial description.

Three examples are used repeatedly throughout this chapter to illustrate each stage of the naming process for elements; these three examples are:

- Example 1: The first name of the person who is to receive the benefit of an employee's life insurance policy if the primary beneficiary is deceased.
- Example 2: The discount price charged by a particular supplier for a particular product in the previous calendar year.
- Example 3: The date of the last occasion on which Digital was notified of a change of a contractor's hourly billing rate. This is not the date on which the new rate became effective.

2.2.1 Develop the Initial Element Description

The initial description of an element need not be perfect, as it will be reviewed and enhanced in the following step (subhead 2.2.2). However, the description must describe *WHAT* the element is. It should be assumed that the description is being written for someone unfamiliar with the business in question—this ensures that the description is written clearly.

The description should be as context free as possible to enable shareability across the Enterprise. Using the Glossary of Business Terms during the description development will help to diminish potential language issues. For further details on the use of the Glossary, see Appendix A.

It is important during the development of the description that external standards requirements (such as EDIFACT and ANSI) be considered. Refer to Appendix B for information on how to obtain applicable external standards.

2.2.2 Evaluate/Modify the Description

Repeatedly ask the following questions under the three main categories, to test the adequacy of the element description:

1. **Understandable to All Who Have an Interest in the Data**
   - Is the description written clearly, in English?
   - Would persons unacquainted with the business understand the description?
   - Does the description only describe *WHAT* the element is?
   - The description should exclude the following:
     - — *HOW* the element is implemented.
     - — *WHO* uses the element.
     - — *WHY* the element is used.
     - — *WHEN* the element is used.
     - — *WHERE* the element is used.
2. **Stable to Future Changes in the Business**
   - Is the description free of jargon?
   - Is the description free of current organizational structure information?
   - Is the description resilient to changes in the business?
3. **Unique and Unambiguous**
   - Are there other elements that fit this description?
   - Can the description be distinguished from all other definitions in the Enterprise?
   - Is the description concise?

When the answer to all of these questions is *YES*, the data description process is complete.

2.3 ESTABLISH A STANDARD ELEMENT BUSINESS NAME

This section provides the guidelines required to establish a standard element name.

The *business name* is a unique name within the context of a 3NF and optimized model by which an element will be commonly referred to in all end-user communication, both written and verbal. For this reason, the *element business name* must:

- Match the meaning of the description
- Make sense
- Be complete
- Be concise
- Be unambiguous
- Describe what it is, not how it is (to be) implemented, who uses it, or why.

The description is the starting point from which the business name is developed. If the description was not properly developed, the development of a valid business name will be adversely affected. It is an iterative process - the description may need enhancement if there is difficulty in deriving from it the standard business name.

The business name consists of business objects and/or processes that the element pertains to, and *NOT* organizational function names, as the business organization is subject to frequent changes. The objects are listed in the order of most general to most specific. Each object/process could be preceded by any adjective or adverb that specifically describes that object/process.

If the resulting name does not satisfy all of the above, then the description *and/or* name should be modified.

The basic steps involved in establishing a standard element name are as follows:

1. Identify the value type of the element.
2. Identify the primary business object/process.
3. Identify further business object/processes.
4. Identify qualifiers.
5. Remove unnecessary words.
6. Check the size of the business name.
7. Review and approve the business name.

2.3.1 Identify Value Type of the Element

The *value type* identifies what kind of information the element contains.

To identify the value type, provide a one word answer to the following question:

"What kind of data does this data element contain?"

Example 1: "The first name of the person who is to receive the benefit of an employee's life insurance policy if the primary beneficiary is deceased."

It is the name of "the person who is to receive the benefit of ..." A one word answer is *"name"*; therefore, "name" is the value type.

Example 2: "The discount price charged by a particular supplier for a particular product in the previous calendar year."

It is the discount *"price"*; therefore, "price" is the value type.

Example 3: "The date of the last occasion on which Digital was notified of a change of a contractor's hourly billing rate. This is not the date on which the new rate became effective."

It is the notification of a *"date"*; therefore, "date" is the value type.

DO NOT specify value types that are the physical implementation of the data element. The value type should reflect *WHAT* information the data element conveys, not how it is stored. Consider, for example the data elements *customer number* and *job description text*.

The implementation of a customer identifier may currently be a number, but may change to include alphabetic characters, hyphens, or other characters. Text is also an implementation of the data element and not a value type. The actual value types of these data elements are:

- Identifier
- Description

Therefore the data element names should be *customer identifier* and *job description*.

There are exceptions to the inclusion of the physical implementation in the name:

- The implementation is standard within the Enterprise and always has been. For example, *Digital Order Number*.
- The implementation is standard external to the Corporation. For example, *phone number* or *U.S. Social Security Number*.

The Glossary of Business Terms contains all the defined valid value types. A partial list of valid value types and their correct usage is discussed in Appendix A. In the event that a new value type is identified, register the new entry with the Glossary Administrator; refer to Appendix A for information on how to register new terms.

2.3.2 Identify the Primary Object/Process

This step is performed by repeatedly answering, with a one word answer, the question:

"Object/process of/for what value type?"

Place the primary business object/process before the value type.

Example 1: "The first name of the person who is to receive the benefit of an employee's life insurance policy if the primary beneficiary is deceased."

It is the name of "the person who is to receive the benefit of..." A one word answer is *"beneficiary"*; therefore, it is a *beneficiary name*.

Example 2: "The discount price charged by a particular supplier for a particular product in the previous calendar year."

It is the price of a *product*; therefore, it is a *product price*.

Example 3: "The date of the last occasion on which Digital was notified of a change of a contractor's hourly billing rate. This is not the date on which the new rate became effective".

It is the date of *notification*; therefore, it is a *notification date*.

2.3.3 Identify Further Business Object/Processes

This process is performed by repeatedly answering, with a one word answer, the question:

"Object/process of/for what business object/process?"

The question is repeated with the latest object/process until the answer covers "Digital". The latest object/process is placed at the beginning of the Business Name.

Example 1: "The first name of the person who is to receive the benefit of an employee's life insurance policy if the primary beneficiary is deceased."

Beneficiary of/for what?	Answer: a "policy"
Policy of/for what?	Answer: "insurance"
Insurance of/for what?	Answer: an "employee"
Employee of/for what?	Answer: "Digital"

NOTE

***Life* is not a business object or process, it is an *adjective* to insurance.**

Therefore, it is an "employee insurance policy beneficiary name."

Example 2: "The discount price charged by a particular supplier for a particular product in the previous calendar year."

Product of/for what?	Answer: "supplier"
Supplier of/for what?	Answer: "Digital"

Therefore, it is a "supplier product price."

Example 3: "The date of the last occasion on which Digital was notified of a change of a contractor's hourly billing rate. This is not the date on which the new rate became effective."

Notification of/for what?	Answer: a "change"
Change of/for what?	Answer: a "rate"
Rate of/for what?	Answer: "billing"
Billing of/for what?	Answer: a "contractor"
Contractor of/for what?	Answer: "Digital"

Therefore, it is "contractor billing rate change notification date."

2.3.4 Identify Qualifiers

For each value type and each business object or process identified, scan the description for any adjectives or adverbs that better describe it. If there is a phrase that serves this purpose, attempt to replace it by a single word that means the same thing.

Place each qualifier immediately before the Object/process or value type that it applies to. If there is more than one, place them in the order that makes the most sense. The syntax in BNF (Bachman Notation Formula) notation of the element name is:

[[[{Adjective}..]{Object}]..][{Adjective}..]{Object}[[{Adjective}]..]{Value Type}]

NOTE

In the previous syntax, "object" means "object/process" and "adjective" means "adjective/adverb".

Example 1:

"The first name of the person who is to receive the benefit of an employee's life insurance policy if the primary beneficiary is deceased."

"Employee Insurance Policy Beneficiary Name."

Are there any qualifiers of "name"? Yes, "first."
Are there any qualifiers of "beneficiary"? There is the phrase "should the primary beneficiary be deceased." In this case, such a beneficiary is referred to as a "contingent" beneficiary.
Are there any qualifiers of "policy"? No.
Are there any qualifiers of "insurance"? Yes, its "life" insurance.
Are there any qualifiers of "employee"? No.

Therefore, the full element business name is:

"Employee Life Insurance Policy Contingent Beneficiary First Name."

Example 2:

"The discount price charged by a particular supplier for a particular product in the previous calendar year."

"Supplier Product Price."

Are there any qualifiers of "price"? Yes, there are three: "charged," "discount" and "in the previous calendar year." The latter may not be replaced by a single word, therefore, there is an object of "year." There are no further objects or processes. There are two qualifiers of year, namely "previous" and "calendar." Obviously "previous calendar year" is the business meaning, as the supplier issues a price list every calendar year, than "calendar previous year." Arranging "charged," "discount" and "previous calendar year" into a suitable order gives "previous calendar year charged discount price."

Are there any qualifiers of "product"? No.
Are there any qualifiers of "supplier"? No.

Therefore, the full element business name is:

"Supplier Product Previous Calendar Year Charged Discount Price."

Example 3:

"The date of the last occasion on which Digital was notified of a change of a contractor's hourly billing rate. This is not the date on which the new rate became effective."

"Contractor Billing Rate Change Notification Date"

Are there any qualifiers of "date"? No.
Are there any qualifiers of "notification?" In this case it is clear that "the last occasion" applies to the "notification" and not to the "change." Note that there is a subtle difference between a "rate change last notification date" and a "rate last change notification date." If there can be more than one notification of the same change, the meaning of the former is clear, whereas the second is ambiguous. (Which notification date is it referring to? The first? The second? The last?)

There are no qualifiers of "contractor," "billing," "rate" or "change". The full element business name is:

"Contractor Billing Rate Change Last Notification Date."

2.3.5 Remove Unnecessary Words

At this stage of the process, the business name is meaningful but not concise. However, there may be unnecessary business terms contained in the name. During this stage of the procedure, it is necessary to examine each business term in the name to see if its omission will degrade either the meaning or the precision of the business name.

Example 1:

"Employee Life Insurance Policy Contingent Beneficiary First Name."

In this case, "insurance" implies policy; therefore the word "policy" may be omitted. Also, if the only life insurance the corporation has any business interest in is that of employees, then "employee" is assumed. However, "employee" will be retained to clarify if the insurance is that of an employee and not of a dependent. Thus, the final element name is:

"Employee Life Insurance Contingent Beneficiary First Name."

Example 2:

"Supplier Product Previous Calendar Year Charged Discount Price."

In this case, since prices are always charged, the word "charged" may be omitted. Similarly, it is assumed in this example that a product always comes from a supplier; thus, "supplier" may also be omitted. The year in this example is defined to be a calendar year. Thus, the final element name is:

"Product Previous Year Discount Price."

Example 3:

"Contractor Billing Rate Change Last Notification Date."

There is only one candidate for omission here, "billing," since the contractor's rate is presumably always billed. Thus, the element name is:

"Contractor Rate Change Last Notification Date."

2.3.6 Check the Size of the Business Name

The length of the business name must be less than or equal to 80 characters. If it exceeds the 80-character limitation, refer to subhead 2.3.5, Remove Unnecessary Words, to determine if the omission of a business term will degrade the meaning or precision of the business name.

2.3.7 Review and Approval

Review the name and description to ensure that all development criteria have been fulfilled.

At this step, a review is also required to determine if the element has been defined elsewhere, such as in the *Enterprise Dictionary* or an EDIFACT or ANSI external standard.

The review should also ensure the documentation of *alias names*, which may be an obsoleted name or any other name the business or external standard uses and has not been developed according to this naming procedure. The information will be captured in Related Names and its context.

At the end of this step, the controller approves the standard description and the standard business name.

2.4 DERIVE THE STANDARD ABBREVIATED NAME

This section details the necessary steps required for deriving the *abbreviated name*.

The words that compose the business name are called business terms. It is from the previously developed standard business name that the abbreviated name is derived. All abbreviated names must be unique.

Abbreviations are assigned based on the meaning of the business term used within the context of the description. Be aware of homonyms and synonyms. Use the correct abbreviation associated with the meaning of the business term.

Standard business terms, their abbreviations and definitions are contained in the Glossary of Business Terms, which is maintained by the Glossary Administrator. See Appendix A for instructions on where to obtain the Glossary.

The basic steps of abbreviating the business name are:

1. Determine if a standard abbreviation already exists for each term.
2. Create a new abbreviation if the standard abbreviation does not exist.
3. Connect the standard abbreviations using underscores.
4. Check the size of the abbreviated name.

2.4.1 Determine if a Standard Abbreviation Already Exists for Each Term

Locate the appropriate business term in the Glossary and use the standard abbreviation given. Be aware of all synonym and homonym situations when locating the appropriate term. For additional information regarding synonym and homonym issues, refer to Appendix A, Using the Glossary of Business Terms.

2.4.2 Create a New Abbreviation if a Standard Abbreviation Does Not Exist

If no existing entry is found in the Glossary, after checking for both synonyms and homonyms, create a new abbreviation for the business term.

These guidelines should be followed while creating new abbreviations:

a. It should be apparent what the word is from the abbreviation.

b. The abbreviation should not bring to mind more than one word; that is, it should be unambiguous

c. The abbreviation should be as short as possible (within the parameters defined in items a and b).

d. The abbreviation should be of a maximum six characters except in very rare circumstances dictated by items a and b.

e. Begin abbreviating by eliminating the vowels, unless the word begins with a vowel.

f. If the word begins with a vowel, retain the leading vowel.

g. The exception to the above are the words that begin with "ex"; in these words, the leading vowel "e" may be omitted.

h. Begin eliminating insignificant consonants from the word.

i. In general, the most significant consonants are the leading and ending ones. Use the same beginning for words that are derived from the same root. For example:

EXEMPT = XMPT
EXEMPTION = XMPTN

j. Where the complete elimination of vowels causes ambiguity, significant vowels should be reinstated. For example:

PRODUCT = PRDCT

"PRDCT" can also be an abbreviation for "PREDICT." In this case vowel "O" should be reinstated. The introduction of "O" gives the abbreviation of "PRODUCT" as "PRODCT".

Now the consonant "C" can be safely eliminated without loss of meaning. The correct abbreviation of PRODUCT is:

PRODUCT = PRODT

k. If abbreviations are in common use across the Enterprise for business terms or phrases, then these can be used instead of creating new abbreviations. For example:

IDENTIFIER = ID
SOCIAL SECURITY NUMBER = SSN
BILL of MATERIALS = BOM

Beware of common abbreviations like "ST", which could mean "Street", "Saint", or "State."

l. Acronyms or phrases including a value type will not require another value type in the abbreviated name. For example,

MAYNARD LIST PRICE - MLP
SOCIAL SECURITY NUMBER - SSN

m. In general, it is not necessary to abbreviate words of five characters or less. Where standards exist use them. For example:

DATE = DT
YEAR = YR

n. There are also standard abbreviations for commonly used suffixes to nouns and adverbs which should be used. They are:

- D = ED
- TN = TION
- MT = MENT
- G = AGE
- Y = LY
- G = ING

2.4.3 Connect the Standard Abbreviations Using Underscores

Join the abbreviations together in the same order as the terms appear in the business name separating the abbreviations by use of an underscore (_).

Example 1:
Element: Employee Life Insurance Contingent Beneficiary First Name
Becomes: EMPLYE_LIFE_INSRNC_CNTGNT_BNFCRY_FIRST_NAME

Example 2:
Element: Product Previous Year Discount Price
Becomes: PRODT_PREVS_YR_DSCNT_PRC

Example 3:
Element: Contractor Rate Change Last Notification Date
Becomes: CNTRCTR_RATE_CHNG_LAST_NTFCTN_DT

2.4.4 Check the Size of the Abbreviated Name

The size of the abbreviated name must be less than or equal to 31 characters, including the underscores. If it is not, then one or more of the following must be done until it is less than or equal to 31 characters.

- If there are any new abbreviations, try and make them shorter.
- Eliminate the least significant abbreviations from the name, that is, those abbreviations that introduce the least amount of ambiguity.

Example 1:

EMPLYE_LIFE_INSRNC_CNTGNT_BNFCRY_FIRST_NAME

This abbreviated name has 43 characters. In this case, the two words *life* and *beneficiary* imply a context of insurance. "Life" can also be eliminated without degrading the precision of the name. Therefore, the abbreviated name becomes:

EMPLYE_CNTGNT_BNFCRY_FIRST_NAME

Example 2:

PRODT_PREVS_YR_DSCNT_PRC

This abbreviated name has 24 characters, which is acceptable.

Example 3:

CNTRCTR_RATE_CHNG_LAST_NTFCTN_DT

This abbreviated name has 33 characters. The combination of "contractor" and "change" implies a "rate". Also, a "date" is implied. However, "date" is the value type. The elimination of "rate" is therefore recommended and the abbreviated name becomes:

CNTRCTR_CHNG_LAST_NTFCTN_DT

CHAPTER 3

NAMING GUIDELINES FOR OTHER DATA OBJECTS

This chapter provides naming guidelines for the following data objects.

Fields
Models
Entities
Associations

The guidelines presented in this chapter supersede or are in addition to the naming guidelines defined in Chapter 2, as noted.

3.1 FIELD NAMING GUIDELINES

This section explains the guidelines used to name standard fields. The field naming rules apply to the Data Fields defined in DEC STD 065-0. A *field* is an addressable item of data within a computer file. A field definition provides the information that a computer application needs in order to be able to manipulate that data item.

Every standardized field definition must be related to one and only one element definition. Similarly, every nonstandard field must be related to one and only one standard field definition. If the business meaning of a field differs from that of the element, then a new element must be created.

The basic steps required for naming standard fields are as follows:

1. Define the standard element business name.
2. Derive the standard element abbreviated name.
3. If the Data Description Language (DDL) is Common Dictionary Operator (CDO), assume the Element Abbreviated Name as the Standard Field Name.
4. Use the CDO Standard Field Name as the basis to formulate other Standard DDL Field Names, such as Pascal, SQL, and Focus.
5. Modify the CDO Field Name to conform to the constraints of the host DDL. Some languages may have specific restraint requirements (such as characters or length). For example, the Pascal language prohibits underscores within the field name; therefore, the CDO Field Name of PART_ID becomes PARTID for the Standard Pascal Field Name.

   Length restrictions may also exist within certain DDLs. To create the Standard Field Name, begin by eliminating the least significant abbreviation(s) from the CDO Field Name until the length is less than or equal to the character length limit of the DDL. Follow the same rules as *Check the Size of the Abbreviated Name* in subhead 2.4.4. The resulting shortened name should be as meaningful as possible.

Naming procedures for nonstandard fields follow the requirements of the Data Description Language and are the responsibility of the Data Resource Specialist.

3.2 MODEL NAMING GUIDELINES

This section describes the guidelines used to develop and name 3NF and optimized models. The process for naming a model is the same for both types of models.

A *data model* is a rigorous and authoritative depiction of all data that is (or is expected to be) of significant importance to the enterprise, along with the applicable business rules.

The *data model name* is a one phrase description of this business information. The abbreviated name is derived from the *data model business name* by substituting the terms in the business name with the standard abbreviations found in the Glossary of Business Terms and connecting the abbreviations with underscores. The process used for naming a data model is similar to that of a data element with a few exceptions.

The following criteria should be used for arriving at a proper data model name:

1. Identify the controller.
   - — Follow the element controller process detailed in subhead 2.1.
2. Establish the standard model description.
   - — Follow the element description procedures found in subhead 2.2.
   - — While organizational and functional considerations are not valid within an element description, they are acceptable for model descriptions.
3. Establish the standard model business name.
   - — The business name should be unique within model type (3NF or optimized).
   - — Value type identification is not applicable to the model business name.
   - — Organizational and functional names are acceptable in a model business name.
   - — The business name size should not exceed 80 characters.
   - — Review and approve the data model description and business name.
4. Establish the standard model abbreviated name.
   - — Abbreviation rules for business terms explained in subhead 2.3 apply to the abbreviated terms and should be used in conjunction with the Glossary of Business Terms.
   - — The abbreviated name size should not exceed 31 characters.
5. Review and approve the data model description and business name.

Example:

Description: *Representation and definition of all personnel-related employee data. The model includes the following data subject areas: benefits, compensation, employee, employment, job, organization, and training.*

Business Name: *PERSONNEL EMPLOYEE DATA*
Business Abbreviated Name: *PERSNL_EMPLYE_DATA*

3.3 ENTITY NAMING GUIDELINES

This section describes the guidelines used to develop descriptions and name entities.

An *entity* is anything about which the business needs to collect information. It can be a class of people, places,things or concepts. Entities are defined in the context of a data model.

The *entity name* is a "single word or phrase" description of the object of business information. It describes "what" this object is. The abbreviated name is derived from the business name by substituting the term or terms in the business name with the standard abbreviations found in the Keyword Glossary and connecting the abbreviations with underscores.

The process for naming the entity is similar to the naming of a data element with some exceptions.

The following criteria should be used for arriving at a proper entity name:

1. Identify the controller.
2. Establish the standard entity description.
   - — The description of an entity must always define the entity as an independent business object, rather than defining the role that the entity plays within the model. The description development of an entity must follow the element description procedures detailed in subhead 2.2.
3. Establish the standard entity business name.
   - — The entity name should be unique within model type (3NF or optimized).
   - — Value type identification is not applicable for an entity business name.
   - — Avoid vague business names such as *status* or *class*; such name can have different meanings. Specific names such as *product status* or *employee* are preferred.
   - — The business name size should not exceed 80 characters.
   - — Review and approve the entity description and business name.
4. Establish the standard entity abbreviated name.
   - — Abbreviation rules for business terms explained in subhead 2.4 apply to the abbreviated terms and should be used in conjunction with the Glossary of Business Terms.
   - — The entity abbreviated name size should not exceed 31 characters.
5. Review and approve the entity description and business name.

Example:

Description: *An individual who works for Digital in return for financial compensation, is identified by a Digital badge number, and has signed an employee agreement without an assigned end date.*

Business Name: *EMPLOYEE*
Business Abbreviated Name: *EMPLYE*

3.4 ASSOCIATION NAMING GUIDELINES

This section describes the guidelines used to develop descriptions and business names for associations.

An *association* is any controlled connection among entities. Whenever the business needs to record, control, or store information about an association between entities, there must be a defined business association. DEC STD 065-0 defines four types of associations: *Relationships (Complex and Simple), Subtypes, and Classifications*. The naming procedure defined in this section is pertinent for all association types.

The naming rules for all four types of associations differs slightly from that of an element.

The association business name is *always* in the form of a verb or verb phrase that provides the reader with a better understanding of the association among entities within a model. Subtypes and classifications will have a qualifier added to the verb or verb phrase.

An association business name and abbreviated name are *not* unique. Uniqueness is obtained by concatenating entities with an Association Name that is a verb or verb phrase. If two Associations exist with the same entities, a different Association Name must be used.

The following is a detailed explanation of the process for naming relationships (simple and complex), subtypes, and classifications.

Relationship Naming

1. Identify the controller.
2. Establish the standard relationship description.
   - — Relationship descriptions must include the entities that participate in the association.
   - — Use meaningful verb or verb phrases that capture the essence of the business rule that connects the entities in the relationship.
3. Establish the standard relationship business name.
   - — Identify the primary verb or verb phrase that connects the entities.
   - — In general, verbs such as *has* and *associates* should not be used. These verbs only denote a connection with no applied business rules.
   - — The business name size should not exceed 80 characters.
4. Establish the standard relationship abbreviated name.
   - — Abbreviation rules for the business terms explained in this subhead (3.4) apply to the relationship verb only.
   - — Prepositions and articles of the relationship verb phrase need not be abbreviated or submitted as business terms to the Glossary.
   - — Plural verbs or verb phrases are acceptable for inclusion in the Glossary.
   - — The abbreviated name size should not exceed 31 characters.
5. Review and approve the relationship description and business name.

Example:

Description: Represents the relationship between an employee and the Center of Control that is responsible for the employee's payroll expenses.

Business Name: *IS PAID BY*
Business Abbreviated Name: *IS_PAID_BY*

Subtype Naming

The subtype naming process (like relationship naming) also uses a verb or verb phrase. The verb or verb phrase should contain the phrase "IS SUBTYPE OF" as part its business name. The phrase should also have a qualifier in front of the word "subtype" that explains the criteria or business view used for subtyping.

Example:

Description: A "contractor" is an employment subtype of "worker."

Business Name: *IS EMPLOYMENT SUBTYPE OF*
Abbreviated Name: *IS_EMPLYMT_SUBTYPE_OF*

The subtype business name will have the formula "IS xxxxx SUBTYPE OF", where xxxxx refers to the business view qualifier, which in the above example is "employment."

Note: In some instances, it may be helpful to read the subtype name in the reverse direction ("IS xxxxx SUPERTYPE OF"), to add to business clarity.

Classification Naming

The classification naming process (like relationship naming) also uses a verb or verb phrase. The verb or verb phrase should contain the phrase "IS CLASS OF" as part of its business name. The phrase should also have a qualifier in front of the word "class" that explains the criteria or business perspective used for classification.

Example:

Description: A "bill-to contact" is a class of "employee" to whom billing contracts are sent. (The bill-to contact could also be the contact for deliveries.)

Business Name: *IS CONTACT CLASS OF*
Abbreviated Name: *IS_CNTCT_CLASS_OF*

The classification business name will have the formula "IS xxxxx CLASS OF", where xxxxx refers to the business view qualifier, which in the above example is "employee."

Note: In some instances, it may be helpful to read the classification name in the reverse direction ("IS xxxxx CLASS OF"), to add to business clarity.

APPENDIX A USING THE GLOSSARY OF BUSINESS TERMS

The Glossary of Business Terms is composed of registered business terms. Business terms can be in the form of terms that support the data-naming process, as well as terms that will allow automated searches and inquiry for object groupings by subject, function, organization, and so on.

Text copies of the Glossary are available from REFDV1::ENTERPRISE$GLOSSARY. Files include:

- GLOSSARY$VALUE_TYPE (Value Type List)
- GLOSSARY$UPDATE (New and updated business terms by week)
- GLOSSARY$ABBR (Business terms sorted alphabetically by abbreviations)
- GLOSSARY$TERM (Business terms sorted alphabetically by business term)
- GLOSSARY$LIST (Listing of business terms and abbreviations - no description included)

The purpose of the glossary is to manage the redundancy of business terms and to control the use of synonyms and homonyms in order to eliminate redundant data object definitions.

— **Synonyms** are different words having the same meaning in a specific business context. For example, one organization may use the term "customer", while another uses "client." In the Glossary the user will be made aware of the duplicated meaning and will be informed to use the preferred business term, "customer."

  There may also be instances where "customer" and "client" are not synonymous with one another. The meaning of "customer" and "client" may be quite unique and different in meaning. The meaning of the business term is dependent upon its context within the description of the object. In this case, the terms "customer" and "client" would be assigned unique abbreviations.

— **Homonyms** are one of two or more words that have the same sound and often the same spelling but differ in meaning. For example, the word "second" can mean a unit of time or an item following the first in an order, place, rank, time, or quality. In this case, two unique abbreviations will exist in the Glossary for these two different meanings. For example:

SCND = A unit of time
SECOND = Coming next after the first

The abbreviation *SCND* refers to a unit of time, while *SECOND* refers to coming after the first.

Using the Glossary during the development of an object description may help to avoid potential synonym issues and influence the business to substitute preferred words in the description. However, business meaning and terms that make sense to the business are what belong in the Business Name. The Data Resource Specialist will resolve synonym and homonyms through the abbreviated name.

A.1 PROCEDURES TO REGISTER OR CHANGE BUSINESS TERMS

The following subheads define the procedures used to register a new business term or change an existing term.

A.1.1 Procedure to Register New Terms

All data object names must be constructed from business terms listed in the Glossary of Business Terms. When the Glossary does not contain the required business term, a new entry to the Glossary must be submitted.

All business terms and value types submitted are subject to a quality assurance review by the Area Glossary Administrator. See subhead 2.4.2 in this document for criteria used during the review. Each Area Administrator will offer consulting services, as well as resolve quality issues that may have a cross geographic impact. Upon resolution of all issues, the Area Glossary Administrator will submit the new business term or value type to the Enterprise Glossary Administrator for inclusion to the Glossary update.

Refer to the Data Management Source Catalog, *DATAMGR*, to obtain information regarding your Area Glossary Administrator.

The Glossary Registration Form shown in Figure 2 must be used to submit additions or recommend modifications to the Glossary.

A.1.2 Changing an Existing Term

Changes to existing terms may have a large impact on standard definitions. For example, the term may have been used for approved data object definitions. Before the change can become effective the impact of the change must be analyzed. The Controller and/or Originating function must be informed about the change. Synchronization between dictionary data dictionaries and the glossary is imperative. The Controller and/or Originating function reviews the definition of the term and approves the change, that is, Field Service is now Customer Service.

However, there are minor corrections to the Glossary (typing errors), which can be corrected at any time. The decision as to which type of change applies (major/minor) lays with the glossary administrator.

Use the guidelines detailed in *Procedure to Register New Terms* to submit changes for an existing term.

Figure 2: Sample Glossary Registration Form

```
Submitter Name:  _____________________________________________

Organizational Name:  _____________________________________________

Vaxmail/ALL-IN-1:  _____________________________________________

DTN:  _____________________________________________

Business Term:  _____________________________________________

Proposed Business Term Abbreviation:  _____________________

Business Term Definition:  _____________________________
(Descriptive business text of the term)


Value Type:  _____________________________________________

_____________________________________________

_____________________________________________
(Yes, No) If yes, provide example

Notes:  _____________________________________________

_____________________________________________

_____________________________________________

_____________________________________________

_____________________________________________

(Narrative text of modification.  Please note reasons for change
and what has changed; for example, "Field Service is now Customer
Service".  If known, synonyms and homonyms should be noted.)
```

A.2 GUIDELINES FOR CORRECT USE OF VALUE TYPES

The value type reflects *WHAT* information the data element conveys, not how it is stored.

Guidelines are being provided for the following partial list of value types, in order to clarify the differences between similar values.

QUANTITY/COUNT

QUANTITY is used in the sense of *how many* items. For example, *ORDERED QUANTITY*.

COUNT is used, if the occurrences are incremented or decremented. It is the result of a counting process. For example, *HEAD COUNT*.

AMOUNT/PRICE/COST

AMOUNT applies to monetory amount. For example *ORDER NET AMOUNT*. The currency of the amount is recorded in the description and optional in the Business Name.

PRICE and COST are special subclasses of AMOUNT and do not need to repeat the word "amount." For example, *LIST PRICE and STANDARD COST*

IDENTIFIER/NUMBER

Identifier is a string of characters which uniquely identifies each single occurrence of a place, thing, business concept or document in Digital. For example, an identifier is assigned to each Customer Name.

Often the Identifier is a *number*. Since number represents the physical implementation characteristics of the definition, it must not be used as a value type.

However, there are exceptions to the above rule. For example, number can be used when it is a commonly accepted term and used throughout the Enterprise. For example, *TELEPHONE NUMBER, DEC ORDER NUMBER*. See Chapter 2 for additional information on exceptions.

CODE/INDICATOR

CODE is a classification of the occurrences that are mutually exclusive. All codes have a set of values that are maintained in a table.

When you have *code* as an attribute, you also need a *description* attribute to support it. It is usually defined as *the text equivalent of code*.

INDICATORS are what we usually call *flags* and are binary. They designate the answer to limited alternatives.

For example, *INVOICE ONLY INDICATOR* indicates whether the order was created to generate an invoice only. It requires a *yes* or *no* response.

DESCRIPTION/NAME

DESCRIPTION is used when a code or indicator is described for a meaning. The meaning could express different aspects or languages. For example, *FUNCTION CODE DESCRIPTION*.

NAME is used when the definition represents a commonly known designation understandable by all cultures and geographical regions. For example, *PERSON NAME*.

DATE/TIME

DATE includes all or some units of *time*, such as, year, month, day, hour, minute, second, and so on; it is the instant at which something happens.

TIME is used to represent the time that has elapsed since a certain date. TIME is also expressed in a time unit.

APPENDIX B RELATED DOCUMENTS

B.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00065-00	*DEC STD 065-0 Digital Standard Data Definitions - Policy and Requirements*

Use VTX SMC to order copies of EL-class documents from Standards and Methods Control. Send distribution questions to JOKUR::SMC or call DTN: 234-4423.

B.2 Other Digital Documents

Document Number	Document Title
	Digital Policy 5.12 Standard Data Object Definitions
	Glossary of Business Terms
	Project Data Management Standards and Procedures

B.3 Other Documents

Document Number	Document Title
	EDIFACT Standards
	ANSI Standards

- EDIFACT general information can be obtained through VTX (keyword: "EDI"). EDIFACT messages, directories, and general Digital documentation can be ordered by sending mail to the following mail account:

  "European Data Management @GEO"

- ANSI documents are available from:

  ANSI (American National Standards Institute),
  1430 Broadway, New York, NY 10018
  Telephone (212) 354-3300 x479

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